RailXplore APM

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The digital performance twin for trackside signaling assets. Access live data of your assets 24/7 and benefit from build-in data analytics to maximize the efficiency, reliability, and availability of your system.

RailXplore APM (Asset Performance Monitoring)

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Product Description

To remain competitive in the future, rail operators need to make the most of their assets, and thus have clear visibility of their condition. **RailXplore APM** provides rail operators and maintainers prompt and precise information about assets' health status to support everyday decisions. The solution is designed to manage core signaling trackside assets and maximize the performance of rail infrastructure operations.

RailXplore APM application

- User-friendly diagnostics
- 24/7 real-time access to data and alerting of incidents and events
- Assets life-cycle information
- Advanced data analytics
- Ensure secure and safe data access

RailXplore APM integrates next-generation technologies to enable an end-to-end asset monitoring system:
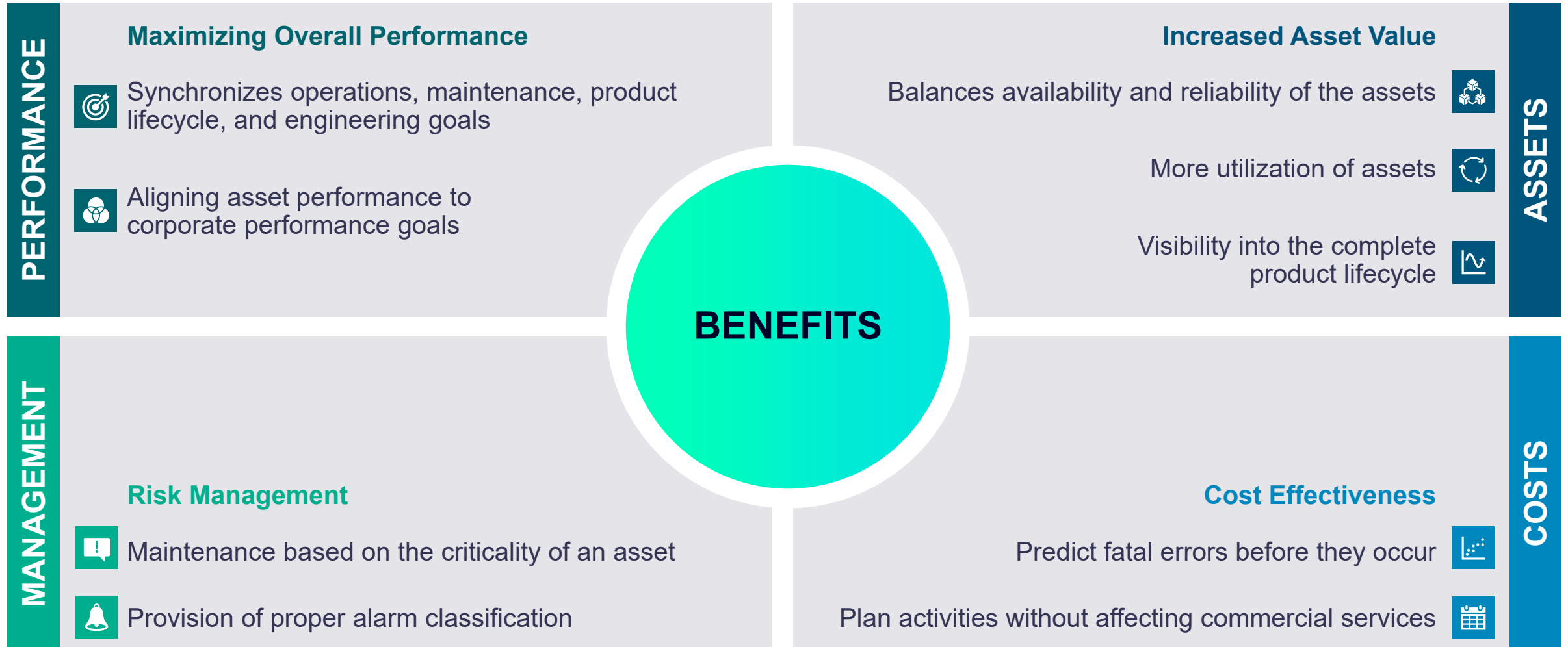
Signaling components

Data collection from:
- Clearguard TCM100
- Clearguard ACM200/250
- Clearguard XCM300

Secure connectivity

- CoreShield Connect platform
- Coreshield DCU
- Secure your data stream and pre-process it on the way

Cloud and edge computing

- RailXplore APM application
- Edge & Cloud computing digital application
- Make the most out of your data

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Benefits of RailXplore APM

PERFORMANCE

Maximizing Overall Performance

Synchronizes operations, maintenance, product lifecycle, and engineering goals

Aligning asset performance to corporate performance goals

ASSETS

Increased Asset Value

Balances availability and reliability of the assets

More utilization of assets

Visibility into the complete product lifecycle

BENEFITS

MANAGEMENT

Risk Management

Maintenance based on the criticality of an asset

Provision of proper alarm classification

COSTS

Cost Effectiveness

Predict fatal errors before they occur

Plan activities without affecting commercial services

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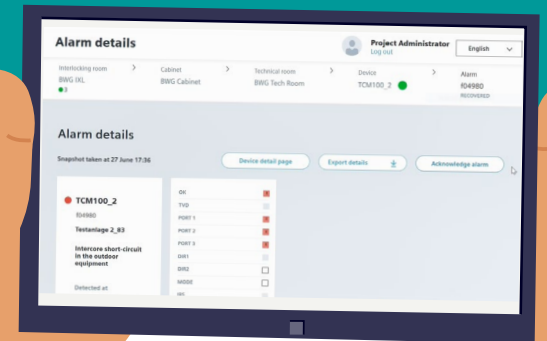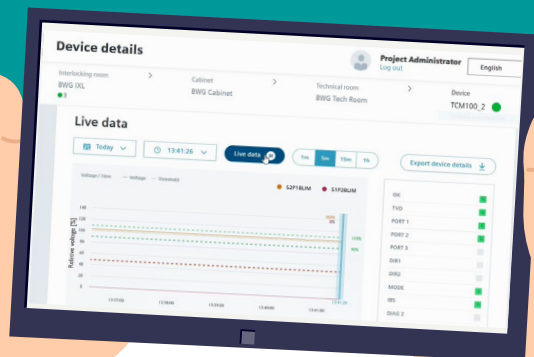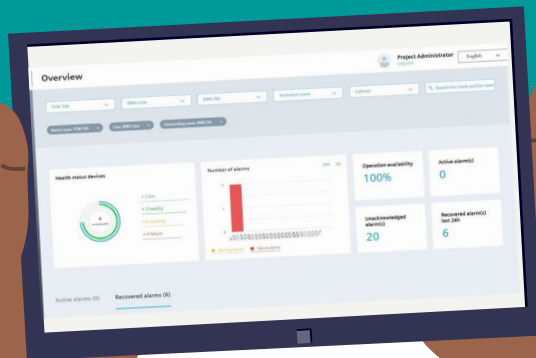# Key Functionalities

Asset Health Status

- Status of the complete system
- Boosting the operations and maintenance decision-making
- Ease the operator and maintenance communication
- Remote monitoring of asset conditions

Device Analytics

- Ensure fast root cause and troubleshooting process
- Reduce the mean-time-to-repair
- Facilitate the record analysis and patterns
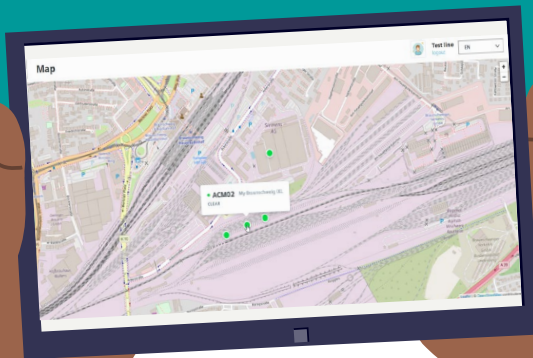- Automate root cause analysis

Maintenance Alarms

- Prioritized maintenance alarms
- Ease the corrective maintenance
- Out-of-the-norm alarms detection
- Reduce on-site track inspections

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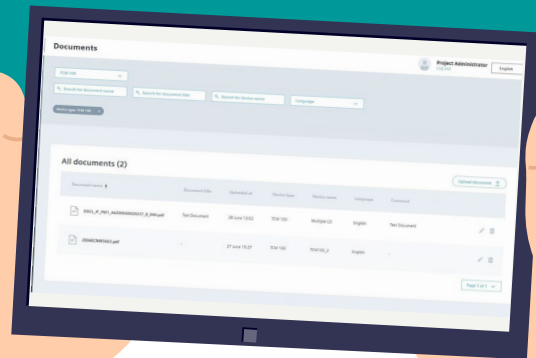
Key Functionalities

Dynamic Map

- Location and accessibility

- Asset health status at a glance

- Asset information at any time and place

- Optimizing the troubleshooting planification

Line Documents

- Always up-to-date line documentation

- All the asset documentation available

- Configurable specific-project documentation

- Readable online on-site / protocols

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System Architecture

Data sources

System connectivity

Data processing

Output front end

Signaling assets

- Clearguard ACM200/250
- Clearguard XCM300
- Clearguard TCM100

OT servers

- SCADA
- HMI
- PLCs
- RTUs

CoreShield Connect

Data collector

CoreShield DCU

Secured connectivity
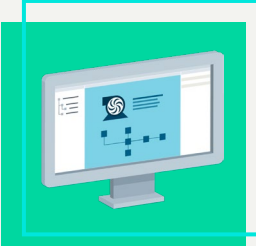
RailXplore APM advanced analytics

Kafka, MQTT, AVRO

Data Management
TimeScaleDB
InfluxDB

Edge application

Cloud-based application

Powered by **Railigent X**

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References

RailXplore APM monitors a segment of a metro line in Antwerp city since 2018.

Since 2019, **RailXplore APM** monitors Siemens TCM100 track circuit in Spain as a proof-of-concept as well as in China for the track vacancy detection system ACM200.

More main line and mass transit projects are requesting **RailXplore APM**:

- Guangzhou Line 1
- Milan Line 2
- Singapore Jurong Line

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